

**Advanced Materials****Epocast<sup>®</sup> 50-A1 Resin  
Hardener 9816****EPOXY LAMINATING SYSTEM**

- High Strength
- Self Extinguishing
- Long Work Life

**DESCRIPTION :**

Epocast<sup>®</sup> 50-A1 Resin/Hardener 9816 epoxy laminating system is an unfilled, solvent-free, easy-to-handle material for the manufacture or repair of composite structures as well as for filament winding. Epocast<sup>®</sup> 50-A1 resin/Hardener 9816 epoxy laminating system is self extinguishing. Epocast<sup>®</sup> 50-A1 / Hardener 9816 is qualified to BMS 8-201, Type III, Rev. F. This product is also available in a shorter work life version - Epocast<sup>®</sup> 50-A1 resin/Hardener 946 epoxy laminating system.

**TYPICAL PROPERTIES AS RECEIVED :**

<b><u>Property</u></b>	<b><u>50-A1 Resin</u></b>	<b><u>9816 Hardener</u></b>	<b><u>50-A1/9816 System</u></b>	<b><u>Test Method</u></b>
Color	Amber	Straw	Amber	Visual
Density, g/cc.	1.21	1.05	1.18	ASTM-D-792
Viscosity, at 77°F (25°C), cP	7,770	250	2,400	ASTM-D-2196
Gel time, at 77°F (25°C), 100 gms, minutes	--	--	65	ASTM-D-2471

**MIX RATIO :**

To 100 parts by weight of Epocast<sup>®</sup> 50-A1 resin, add 14 parts by weight of Hardener 9816. Mix both components thoroughly for several minutes to insure a complete and uniform mixture. Mix only that quantity which can be applied within several minutes after mixing to avoid excessive exotherm.

**CURE SCHEDULE:** Five days at 77°F (25°C) or two hours at 170-200°F (77-93°C) after room temperature gel. Handling and machining may be done after 16-24 hours at room temperature.

**TYPICAL CURED PROPERTIES** (Not for specification purposes)

<u>Test</u>	<u>Results</u>			<u>Test Method</u>
	Cure 7 days <u>at 77°F*</u>	Cure 27 days <u>at 77°F*</u>	Cure 1 day at 77°F <u>+ 2 hr. at 170°F*</u>	
12-ply laminate using #1581 or 7781 glass				
Compressive strength, Ksi (MPa) at 77°F (25°C)	45.86 (316)	49.00 (338)	46.24 (319)	ASTM-D-695
Compressive modulus, Msi (MPa)	3.52 (24.3)	3.13 (21.6)	4.16 (28.7)	ASTM-D-695
Flammability, 60 second vertical test				
self extinguishing time, sec.	0		0	
drip extinguishing time, sec.	0		0	
burn length, in. (cm)	<6 (<15)		<6 (<15)	FAR 25.853A

\* 77°F=25°C; 170°F=77°C

**STORAGE :**

Epocast® 50-A1 Resin/Hardener 9816 should be stored in a dry place, in the sealed original container, at temperatures between +2°C and +40°C (+35.6°F and 104°F). The product should not be exposed to direct sunlight. Under these storage conditions, and when supplied under Huntsman standard certification, this product has a shelf life of 1 year (expiration date may differ based on customer specification).

Material temperatures should be above 18°C (65°F) when mixing. After use, tightly reseal containers.

**PRECAUTIONARY STATEMENT :**

Huntsman Advanced Materials Americas LLC maintains up-to-date Material Safety Data Sheets (MSDS) on all of its products. These sheets contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Users should review the latest MSDS to determine possible health hazards and appropriate precautions to implement prior to using this material.

**First Aid!**

Refer to MSDS as mentioned above.

**KEEP OUT OF REACH OF CHILDREN**

**FOR PROFESSIONAL AND INDUSTRIAL USE ONLY**

---

## IMPORTANT LEGAL NOTICE

Sales of the product described herein ("Product") are subject to the general terms and conditions of sale of either Huntsman Advanced Materials LLC, or its appropriate affiliate including without limitation Huntsman Advanced Materials (Europe) BVBA, Huntsman Advanced Materials Americas Inc., or Huntsman Advanced Materials (Hong Kong) Ltd. ("Huntsman"). The following supercedes Buyer's documents.

Huntsman warrants that at the time and place of delivery all Products sold to Buyer shall conform to the specifications provided to Buyer by Huntsman.

While the information and recommendations included in this publication are, to the best of Huntsman's knowledge, accurate as of the date of publication, NOTHING CONTAINED HEREIN (EXCEPT AS SET FORTH ABOVE REGARDING CONFORMANCE WITH SPECIFICATIONS PROVIDED TO BUYER BY HUNTSMAN) IS TO BE CONSTRUED AS A REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHTS, OR WARRANTIES AS TO QUALITY OR CORRESPONDENCE WITH PRIOR DESCRIPTION OR SAMPLE, AND THE BUYER ASSUMES ALL RISK AND LIABILITY WHATSOEVER RESULTING FROM THE USE OF SUCH PRODUCT, WHETHER USED SINGLY OR IN COMBINATION WITH OTHER SUBSTANCES.

No statements or recommendations made herein are to be construed as a representation about the suitability of any Product for the particular application of Buyer or user or as an inducement to infringe any patent or other intellectual property right. Buyer is responsible to determine the applicability of such information and recommendations and the suitability of any Product for its own particular purpose, and to ensure that its intended use of the Product does not infringe any intellectual property rights.

The Product may be or become hazardous. The Buyer should obtain Material Safety Data Sheets and Technical Data Sheets from Huntsman containing detailed information on Product hazards and toxicity, together with proper shipping, handling and storage procedures for the Product, and should comply with all applicable governmental laws, regulations and standards relating to the handling, use, storage, distribution and disposal of, and exposure to the Product. Buyer shall also take all steps necessary to adequately inform, warn and familiarize its employees, agents, direct and indirect customers and contractors who may handle or be exposed to the Product of all hazards pertaining to and proper procedures for safe handling, use, storage, transportation and disposal of and exposure to the Product, and the containers or equipment in which the Product may be handled, shipped or stored.

Epocast is a registered trademark of Huntsman LLC or an affiliate thereof in one or more countries, but not all countries.

© 2006 Huntsman Advanced Materials Americas Inc.

Main Offices :  
**Huntsman Corporation**  
10003 Woodloch Forest Dr.  
The Woodlands  
Texas 77380  
(281) 719-6000

**Huntsman Advanced Technology  
Center**  
8600 Gosling Rd.  
The Woodlands  
Texas 77381  
(281) 719-7400